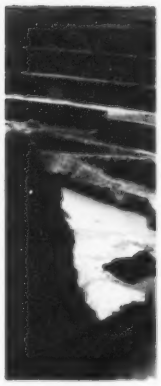
ENERGY WISE

MAKES BUSINESS SENSE

Industrial Initiatives Program

MAJOR CUSTOMERS



PARTICIPANT'S GUIDE

September 2008

This document is a translation, provided for information purposes only.
In all cases, the original French version shall prevail.

Hydro Québec

Foreword

Fostering a Culture of Energy Efficiency

An energy efficiency culture affects all aspects of corporate life. Supported by an overall vision, it means more than just simply improving equipment or process efficiency. It means creating an environment in which new ways of working quickly become habit throughout the organization.

Ensuring success

A few conditions are essential to foster a culture of energy efficiency:

- The support of senior management and employees at all levels
- A vision – a results-driven, all-encompassing approach to energy efficiency
- A policy, program and action plan that cover all aspects of energy efficiency

For an energy efficiency culture to become firmly rooted, an energy committee is just as crucial as team support. In addition to measuring instruments installed in the appropriate places, a scorecard and performance indicators are needed to track change. Announcing results and rewarding good work also have a great effect on employees' participation and team spirit.

Hydro-Québec offers a number of services, including considerable financial assistance, to help its major customers make energy efficiency part of their corporate culture.

Financial Assistance Programs

With a view to achieving the energy savings target set out in its Energy Efficiency Plan, Hydro-Québec has set up three programs for major industrial customers:

1. **ENERGY WISE Industrial Initiatives Program – Major Customers**

   Financial assistance is offered for projects designed to reduce specific electricity consumption.

2. **ENERGY WISE Industrial Analysis and Demonstration Program – Major Customers** (with two components)
   - **Energy analysis** – Financial assistance is offered for an analysis covering all forms of energy used at an industrial site or for a continuous measurement project.
   - **Demonstration of a new technology** – Financial assistance is offered for the demonstration of electricity savings realized through first-time implementation of a new, high-efficiency technology in an industry in Québec.

3. **Plant Retrofit Program – Major Customers**

   Financial assistance is offered for extensive retrofit projects that considerably reduce the overall electricity consumption of one or more plants owned by the same customer.

This guide is intended for customers interested in taking part in the Industrial Initiatives Program – Major Customers. There are several ways to obtain information on the other two programs:

- Contact your commercial officer
- E-mail us at **programmes.ge@hydro.qc.ca**
- Visit **www.hydroquebec.com/majorcustomers/ee**
- Call **1 866 373-6306**

Notice

Under the terms of initiative project agreements signed with customers, Hydro-Québec reserves the right to

- amend or terminate the Program at any time without notice;
- interpret Program terms and conditions;
- reject any proposal submitted by a customer or request changes to a proposal.

Hydro-Québec's sole obligation shall be to pay out the financial assistance provided for in an agreement reached with you. It is up to you to assume full responsibility for implementing any initiative project.

Contents

Introduction		3
Section 1	Definitions	4
Section 2	Eligibility	5
Section 3	Conditions	8
Section 4	Financial Assistance	9
Section 5	Program Process	12
	Deliverables	19
Section 6	Measuring Electricity Savings	21
References		24
Appendix I	Standard Industrial Initiative Project Agreement – Major Customers	25
Appendix II	Tables of Minimum Motor Efficiency under the *Energy Efficiency Regulations*, November 1997	39
Appendix III	Cost Breakdown Differential Cost Breakdown	43
Appendix IV	Contents of Measurement Report	47
Appendix V	Contents of Start-up Report	51

Program description

Hydro-Québec's ENERGY WISE Industrial Initiatives Program – Major Customers offers financial assistance to large-power customers for projects designed to reduce specific electricity consumption.

The Program does not prescribe any specific electricity management measures. Rather, it provides a framework for encouraging customers to submit electricity management proposals, for reviewing them and for granting financial assistance to customers whose proposals meet the Program criteria.

To qualify for financial assistance, participants must agree to demonstrate electricity savings by measuring their consumption **before** and **after** the project.

Since the financial assistance budget is limited, available funds will be allocated to eligible projects on a first-come, first-served basis.

Participation in the Program

To submit a proposal under the Program, fill in the form [*Formulaire de proposition pour un projet d'initiatives*] and submit it to Hydro-Québec along with the supporting documents required.

Under our corporate directive on the *Charter of the French Language*, **you must fill out the French version of the form**. You can download the official French form, along with a courtesy translation, from **www.hydroquebec.com/majorcustomers/ee**.

1 Definitions

The following definitions are specific to the Industrial Initiatives Program – Major Customers.

Adjusted electricity savings

Difference between electricity consumption **before** and **after** implementation of the electricity management measures, adjusted to take into account discrepancies between the level of production at the time the measurement was done and baseline production.

Baseline production

Set of parameters for most typical production at the industrial site.

Initiative project

A project proposed or carried out under the Program.

Production parameters

Measurable factors affecting how much electricity a process requires, including such things as product variations, use of production capacity and seasonal factors.

Specific electricity consumption

Mean amount of electricity used per unit produced.

Specific electricity savings

Difference between electricity consumption **before** and **after** implementation of the electricity management measures, excluding electricity savings resulting from any energy substitution.

2 Eligibility

2.1 Eligible customers

The Program is open to any corporation, partnership or organization that has at least one service contract at large-power rates and operates one or more industrial sites.

The industrial site must use electricity to manufacture, assemble or process goods or foodstuffs, extract raw materials, or handle or transport materials.

2.2 Eligible projects

An eligible project consists of a series of measurable electricity management measures that are to be implemented on one or more pieces of equipment, at a specified cost and within a specified period. It must include all equipment

- that is modified by electricity management measures;
- whose electricity consumption is increased or decreased by the measures;
- whose electricity consumption can be measured separately.

Financial assistance will be granted under the Program for measures that have a minimum life span of 10 years.

The following projects are eligible:

- Replacing existing equipment with other equipment that uses less electricity
- Installing new equipment with the aim of reducing the specific electricity consumption of existing processes
- Installing solar walls
- Installing geothermal systems
- Replacing equipment with ultra-efficient equipment for maintenance reasons

Lighting projects will be considered if they involve products deemed eligible by Hydro-Québec.

For such products, the criterion whereby the payback period must be less than ten years does not apply.

Ineligible projects

The following projects are not eligible:

- Projects with a payback period of more than 10 years, when costs are recouped solely through electricity savings
- Adding production lines
- Building or expanding plants
- Replacing an energy source with fossil fuels
- Power generation or cogeneration projects
- Replacing equipment for maintenance purposes with equipment that uses an equivalent amount of electricity
- Those requiring no capital investment
- Those involving measures required by Québec or Canadian laws, regulations or standards
- Those that may have a negative impact on health, safety or the environment
- Those involving the use of equipment less efficient than the industry standard or generally recognized standards

2.3 Eligible electricity savings

Eligible electricity savings are assessed on the basis of measurable electricity savings.

In the case of equipment replaced with ultra-efficient equipment for maintenance reasons, however, eligible electricity savings are assessed on the basis of the difference between the electricity consumption of ultra-efficient equipment and that of standard equipment used in the industry.

2.4 Eligible costs

The following costs of an initiative project are eligible for financial assistance:

- Acquisition of equipment, including instruments for measuring electricity consumption
- Installation and start-up of equipment done by outside consultants
- Measurements taken by outside consultants **before** and **after** installation of equipment
- Engineering done by outside consultants
- Costs of obtaining a recycling certificate for fluorescent lamps containing mercury, in the case of a lighting replacement project
- Purchase cost differential between ultra-efficient equipment and standard equipment used in the industry
- Additional costs of installation and start-up of ultra-efficient equipment by outside consultants in comparison with installation of standard equipment used in the industry
- Costs of additional engineering by outside consultants needed to set up ultra-efficient equipment rather than standard equipment used in the industry

In-house labor costs are eligible, provided that you submit to Hydro-Québec a report generated by your accounting system showing a breakdown of actual in-house labor costs by trade.

Hydro-Québec reserves the right to exclude costs that it deems excessive.

Ineligible costs

The following costs are not eligible:

- Production losses, waste or other losses caused by implementation of the electricity management measures, and operating, repair and maintenance costs
- In-house production labor costs
- Costs of equipment purchased from affiliates, divisions or plants of the same company are ineligible; only transfer charges are eligible

Engineering costs incurred prior to Hydro-Québec's receipt of the proposal and the costs of purchasing equipment for which purchase orders were issued prior to that date will not be considered in the calculation of financial assistance.

2.5 Motors

For motors not built into the machinery, only premium efficiency motors exceeding the efficiency prescribed by parts 2 and 3 of Schedule I of the *Energy Efficiency Regulations,* November 1997, are eligible under the Program. The eligible cost per motor is the purchase cost differential between a premium efficiency motor and a motor that complies with the regulations mentioned above. Eligible energy savings are those that correspond to the difference between a premium efficiency motor and a motor that complies with the regulations.

The tables of minimum motor efficiency for motors rated 1 to 200 hp from the *Energy Efficiency Regulations*, November 1997, are reproduced in Appendix II.

3 Conditions

Hydro-Québec

- reserves the right to turn down any proposal that fails to meet the Program criteria or when Program funds run out, and also reserves the right to amend or terminate the Program at any time without notice;
- shall not be held liable for damage or injury of any kind whatsoever arising from the Program;
- reserves the right to refuse to grant financial assistance if it cannot obtain reasonable assurances of your company's financial health and long-term operation;
- may refuse to grant financial assistance or to issue a payment when electricity bills or any other accounts are owing;
- may deduct from the financial assistance any amount owing, including any electricity bill, whether overdue or not, or any deposit required on a service contract you hold;
- shall consult you prior to disseminating any information (other than that necessary to monitor the Program) that could adversely affect your competitive position.

You, the eligible customer, shall

- be responsible for selecting the electricity management measures and assessing the electricity savings objectives and costs, and for the electricity savings actually achieved. You shall demonstrate that the electricity savings have been achieved by measuring consumption in accordance with Program requirements;
- respect the timetable for carrying out the initiative project set with Hydro-Québec in order to receive financial assistance under the Program;
- not hire a third party to represent you in your dealings with Hydro-Québec. The financial assistance is strictly reserved for you, and you shall remain solely responsible for the results of the project, no matter what other parties may have been involved;
- inform Hydro-Québec of any other financial assistance received in connection with the project;
- periodically report to Hydro-Québec on progress made with the project. You shall also allow Hydro-Québec to check equipment installation, start-up and the taking of **"before"** and **"after"** measurements during regular business hours;
- agree to disclose the following information related to the initiative project: your name, project costs, amounts of financial assistance, electricity management measures and their field of application, as well as the electricity savings actually realized.

An agreement between Hydro-Québec and you will confirm the definitive terms and conditions of the initiative project.

4 Financial Assistance

Hydro-Québec will grant financial assistance for each initiative project accepted, on the basis of the criteria described in this section.

Since the budget is limited, Hydro-Québec will allocate the financial assistance available at the time proposals are received on a first-come, first-served basis.

If a project is later turned down, the financial assistance allocated will be cancelled.

The terms and conditions of financial assistance will be set out in an agreement substantially similar to the standard agreement included in this guide as Appendix I.

4.1 Financial assistance

The aim of the Program's financial assistance is to reduce the payback period of a project to one year. Nonetheless, financial assistance will be limited to the lowest of the following amounts:

1. **Amount required to reduce the payback period to one year (based on electricity savings)**
2. **75% of project costs**
3. **15¢ per kilowatthour saved, calculated for the first complete year of operation**
4. **$350,000 per project**

You may receive financial assistance for several initiative projects, up to a maximum of $8 million, on the basis of the following criteria:

- One or more service contracts for the same site – $8 million per site
- Several sites under the same service contract – $8 million per contract

In the particular case of strictly administrative buildings, the goal of the financial assistance is to reduce the payback period to three years. Criteria 2, 3 and 4 are still applicable, however.

New administration buildings are also eligible for the Program. Projects of this type must include the following:

- Selection of equipment that exceeds the energy efficiency standards of the references recognized by Hydro-Québec
- Selection of a building envelope that exceeds the energy efficiency standards of the references recognized by Hydro-Québec
- Implementation of alternative technologies that exceed the energy efficiency standards of the references recognized by Hydro-Québec

Hydro-Québec recognizes and relies on the most stringent of the following benchmarks in calculating a project's eligible electricity savings for administration buildings:

- Minimum energy efficiency required by the federal *Energy Efficiency Regulations* for equipment subject to the regulations in force at the time the project proposal is received (see **www.oee.nrcan.gc.ca/regulations/guide.cfm**)
- Benchmark consumption determined by Hydro-Québec, based on the requirements of the *Model National Energy Code for Buildings* (MNECB)
- ASHRAE Standard 90.1-2004—*Energy Standard for Buildings Except Low-Rise Residential Buildings* (**www.ashrae.org**)

4.2 Requirements

The electricity savings objectives must be achieved within a set time.

You must therefore

- order equipment and provide purchase orders within 4 months of signing the agreement with Hydro-Québec;
- complete the initiative project, including measurements, within 18 months of signing the agreement with Hydro-Québec.

If you fail to fulfill these requirements, Hydro-Québec may terminate the financial assistance for the initiative project and demand repayment of any financial assistance you have already received.

4.3 Calculating financial assistance

To calculate the financial assistance for your project, complete Section 9 of the initiative project proposal form [*Formulaire de proposition pour un projet d'initiatives*]. You can download the official French form, along with a courtesy translation, from **www.hydroquebec.com/majorcustomers/ee**.

Eligible costs are described in subsection 2.4.

The cost of electricity to be used in calculating financial assistance is the mean annual cost based on Rate L and your electricity bill for the preceding year.

The payback period is calculated by dividing the total eligible costs of the project by the electricity savings.

The financial assistance required to reduce the payback period to one year is the difference between the total eligible costs of the project and the amount of electricity savings for a full year. Financial assistance is limited, however, to the lowest of the four amounts listed in subsection 4.1.

4.4 Your minimum contribution

In your proposal, you must identify any and all financial assistance obtained or applied for, specifying which amounts come from which sources. You must assume at least 25% of the eligible costs of the project, taking into account all financial assistance from other sources.

4.5 Payment of financial assistance

Under the Program, financial assistance—for an initiative project that is completed on time and within budget and meets its electricity savings objectives—is paid out in three installments. The details of the terms and conditions of payment are set out in Section 5.

1. The first installment, amounting to 25% of the contractual financial assistance allocated, is scheduled to be paid out at the start of the project.
2. The second installment, amounting to 50% of the total financial assistance allocated, is scheduled to be paid out following equipment start-up.
3. The third and final installment, amounting to the balance of the total financial assistance allocated, based on project results, is scheduled to be paid on completion of the project.

However, if the payback period in terms of electricity savings is less than two and a half years or more than eight and a half years, the financial assistance will be paid in one installment scheduled for the end of the project.

To receive payment, you must submit an invoice for each installment.

Invoices shall include the usual applicable taxes. Payments by Hydro-Québec under the Program are normally subject to the goods and services tax (GST) and Québec sales tax (QST), unless you do not do business as defined within those tax systems.

Invoices must include the following information:

- Supplier's business name (organization receiving financial assistance)
- Invoice date
- Total amount of goods or services supplied (amount of installment of financial assistance)
- GST and QST registration numbers
- Amounts of GST and QST, shown separately
- Name of purchaser (Hydro-Québec)
- Description of goods or services supplied (object of transaction)

5 Program Process

The process of the Industrial Initiatives Program – Major Customers is shown in the flowchart on the next page. The eight steps in the process are listed below and explained in detail on the following pages.

Step 1 – Proposal

Step 2 – **"Before"** measurements

Step 3 – Agreement

Step 4 – First installment of financial assistance

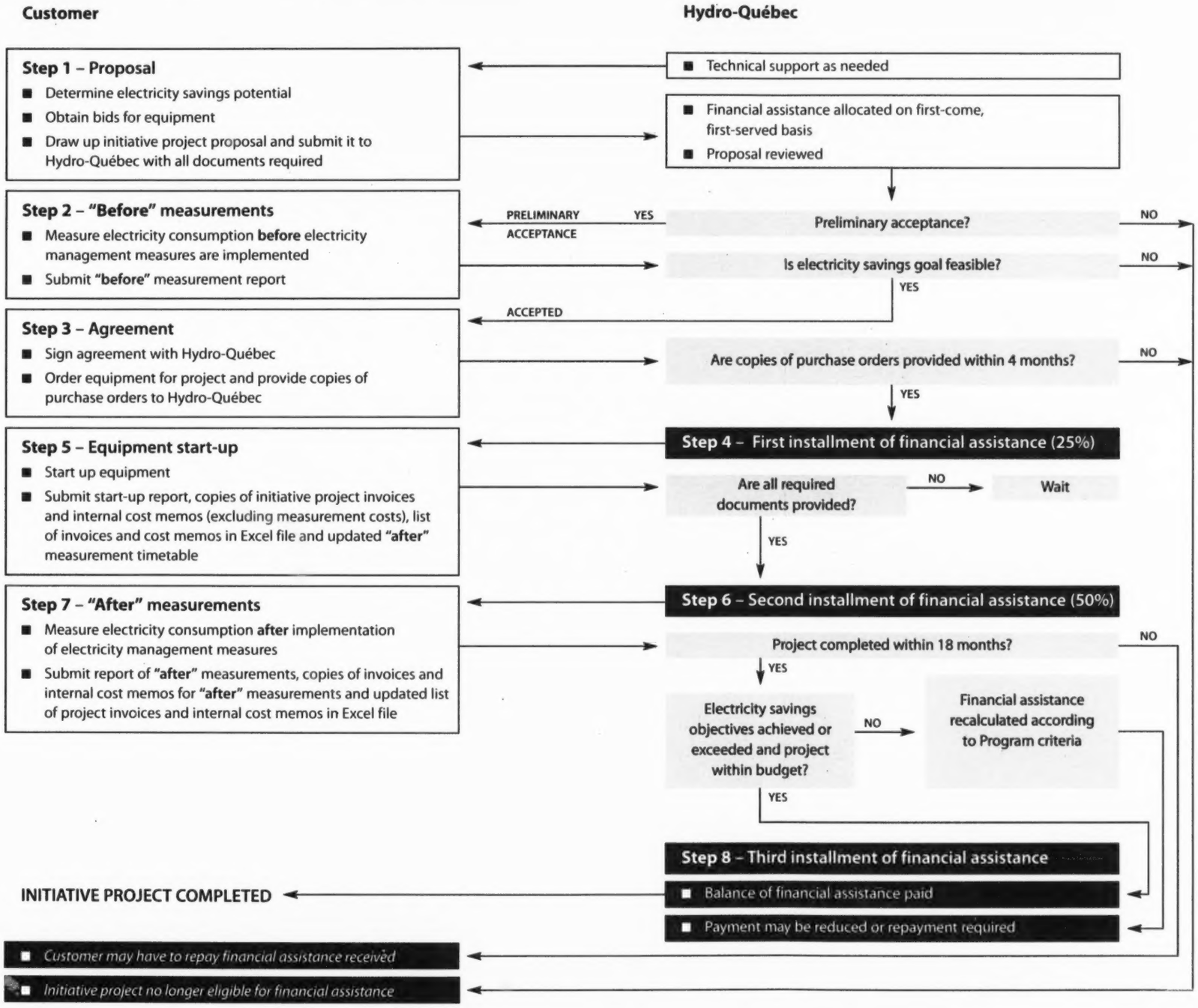
Step 5 – Equipment start-up

Step 6 – Second installment of financial assistance

Step 7 – **"After"** measurements

Step 8 – Third installment of financial assistance

Flowchart for Industrial Initiatives Program – Major Customers


Customer
Hydro-Québec
Step 1 – Proposal
Determine electricity savings potential
Obtain bids for equipment
Draw up initiative project proposal and submit it to Hydro-Québec with all documents required
Technical support as needed
Financial assistance allocated on first-come, first-served basis
Proposal reviewed
Step 2 – "Before" measurements
Measure electricity consumption before electricity management measures are implemented
Submit "before" measurement report
PRELIMINARY ACCEPTANCE
YES
Preliminary acceptance?
NO
Is electricity savings goal feasible?
NO
YES
ACCEPTED
Step 3 – Agreement
Sign agreement with Hydro-Québec
Order equipment for project and provide copies of purchase orders to Hydro-Québec
Are copies of purchase orders provided within 4 months?
NO
YES
Step 5 – Equipment start-up
Start up equipment
Submit start-up report, copies of initiative project invoices and internal cost memos (excluding measurement costs), list of invoices and cost memos in Excel file and updated "after" measurement timetable
Step 4 – First installment of financial assistance (25%)
Are all required documents provided?
NO
Wait
YES
Step 7 – "After" measurements
Measure electricity consumption after implementation of electricity management measures
Submit report of "after" measurements, copies of invoices and internal cost memos for "after" measurements and updated list of project invoices and internal cost memos in Excel file
Step 6 – Second installment of financial assistance (50%)
Project completed within 18 months?
NO
YES
Electricity savings objectives achieved or exceeded and project within budget?
NO
Financial assistance recalculated according to Program criteria
YES
Step 8 – Third installment of financial assistance
Balance of financial assistance paid
Payment may be reduced or repayment required
INITIATIVE PROJECT COMPLETED
Customer may have to repay financial assistance received
Initiative project no longer eligible for financial assistance

5.1 Step 1 – Proposal

In your proposal, you identify potential electricity management measures and evaluate opportunities for carrying out an initiative project.

To submit a proposal that meets Program requirements, you must do the following:

- Fill in the initiative project proposal form [*Formulaire de proposition pour un projet d'initiatives*] Under our corporate directive on the *Charter of the French Language*, **you must fill out the French version of the form**. You can download the official French form, along with a courtesy translation, from **www.hydroquebec.com/majorcustomers/ee**.
- Submit the plan for measuring electricity consumption **before** and **after** (See Section 6).
- Provide the detailed cost breakdown of bids received for equipment purchase and installation and of in-house labor costs by trade (see sample in Appendix III); the French Excel file, along with a courtesy translation, can be downloaded from **www.hydroquebec.com/majorcustomers/ee**.
- Provide the documents that must accompany the proposal form, which are described in Section 10 of the form. Your proposal will not be considered unless you provide all the required documents in the stipulated format.

You must ensure the accuracy of the estimated electricity savings, project costs and timetables. To do so, you must obtain bids for the purchase and installation of equipment. Eligible costs are described in subsection 2.4.

Engineering costs incurred prior to Hydro-Québec's receipt of the proposal and the costs of equipment for which purchase orders were issued prior to that date will not be considered in the calculation of financial assistance.

You may ask Hydro-Québec for further explanations to help you prepare your proposal.

Submitting a proposal

The proposal form and accompanying documents must be delivered to the address below:

Industrial Initiatives Program – Major Customers
Services techniques
Direction – Grandes entreprises
Hydro-Québec
18e étage
2, complexe Desjardins, tour Est
C. P. 10000, succ. Desjardins
Montréal (Québec) H5B 1H7

Hydro-Québec confirms receipt

Hydro-Québec will confirm receipt of the proposal and the availability of financial assistance in writing, and at the same time, inform you of the name of the engineer in charge of reviewing the proposal.

You may then contact the designated Hydro-Québec engineer to discuss any matters related to your project.

Hydro-Québec reviews proposal

Hydro-Québec then reviews your proposal as part of a preliminary screening process.

At this stage, Hydro-Québec checks the following aspects:

1. Eligibility of project, proposed electricity management measures and costs
2. Validity of methods of measuring electricity consumption
3. Feasibility of electricity savings objectives
4. Project timetable

Hydro-Québec may ask for further details and may turn down an incomplete proposal.

Hydro-Québec confirms acceptance or rejection of proposal

You will be notified of the preliminary acceptance or rejection of your proposal within about six weeks of submission to Hydro-Québec.

5.2 Step 2 – "Before" measurements

After Hydro-Québec's preliminary acceptance of the proposal, you must immediately measure the electricity consumption targeted by the project, using the methods set out in the measurement plan submitted with the project proposal.

If the data supplied in the proposal are from measurements already taken or production data deemed valid by Hydro-Québec, you may be allowed to skip this step.

It is advisable to take preliminary "**before**" measurements and submit them to the Hydro-Québec engineer for comment **before** taking exhaustive measurements.

Once the measurements have been taken, you submit a report on "**before**" consumption, signed by a member of the Ordre des ingénieurs du Québec (OIQ), to Hydro-Québec within three months of the preliminary acceptance of the project. An example of measurement report content is given in Appendix IV and available at **www.hydroquebec.com/majorcustomers/ee**. After reviewing the measurement report, Hydro-Québec will agree or refuse to grant financial assistance for the project.

If there are in-house labor costs, you must provide Hydro-Québec with the cost centre assigned to the project in your accounting system.

If a project proposal is rejected, the measurement costs are to be assumed solely by you.

5.3 Step 3 – Agreement

If the initiative project is accepted, you must sign an agreement with Hydro-Québec setting out the energy savings objectives, the project costs, the amount of financial assistance granted, a description of the project and an **"after"** measurement plan. See Appendix I for a standard initiative project agreement.

You must order the equipment for the initiative project and send a copy of the purchase orders to Hydro-Québec within four months of the signing of the agreement.

If you fail to provide copies of the purchase orders for the initiative project within four months, Hydro-Québec may refuse to grant financial assistance to the project.

5.4 Step 4 – First installment of financial assistance

The first installment, amounting to 25% of the contractual financial assistance allocated to the initiative project, is to be paid out once Hydro-Québec has checked all the purchase orders and the cost breakdown.

To receive payment, you must issue an invoice for 25% of the contractual financial assistance allocated, as stipulated in subsection 4.5.

If everything is in order, Hydro-Québec will issue payment within 45 days of receiving the invoice.

5.5 Step 5 – Equipment start-up

You must periodically report on progress to the Hydro-Québec engineer in charge of monitoring your project.

The Hydro-Québec engineer may visit your facility at any time, during regular business hours, to ensure that the project is being carried out as stipulated in the agreement and the Program.

You must submit the following documents to Hydro-Québec:

- Equipment start-up report (an example of the content of which is given in Appendix V and available at **www.hydroquebec.com/majorcustomers/ee**)
- Copies of invoices for the initiative project and internal cost memos (excluding those to do with **"after"** measurements)
- Cost breakdown (Excel file)
- Updated **"after"** measurement timetable
- Report generated by your accounting system showing a breakdown of actual in-house labor costs by trade

5.6 Step 6 – Second installment of financial assistance

The second installment, amounting to 50% of the financial assistance allocated, is to be paid out once Hydro-Québec has checked the start-up report, detailed cost breakdown, report of in-house labor costs, copies of invoices and cost memos, and the updated "after" measurement timetable. To receive payment, you must issue an invoice for 50% of the financial assistance granted, as set out in subsection 4.5.

If everything is in order, Hydro-Québec will issue payment within 45 days of receiving the invoice.

5.7 Step 7 – "After" measurements

You must measure electricity consumption **after** implementation of the energy management measures, as set out in the measurement plan approved by Hydro-Québec.

It is advisable to take the measurements in two stages:

- A preliminary data series is obtained and submitted to the Hydro-Québec engineer for comment; you must adjust your measurement method in response to the opinion of the Hydro-Québec engineer
- Completion of all measurements

The Hydro-Québec engineer may be present during measuring and, if necessary, make sure that the method and instruments used, as well as the equipment whose electricity consumption is being measured and operating and load cycles, are consistent with those defined in your measurement plan.

Within 18 months of the signing of the agreement, you must provide Hydro-Québec with the following documents:

- A report on **"after"** measurements, signed by an OIQ member
- Copies of invoices and internal cost memos for **"after"** measurements
- The updated cost breakdown (Excel file)
- Report generated by your accounting system showing a breakdown of actual in-house labor costs by trade.

If you fail to provide the required documents within the specified time limits, Hydro-Québec may cancel the financial assistance granted and require repayment of any financial assistance you have already received.

5.8 Step 8 – Third installment of financial assistance

The third and final installment, amounting to the balance of the financial assistance allocated to the project, is to be paid out once Hydro-Québec has checked and accepted the **"after"** calculation and measurement report, as well as invoices and cost memos demonstrating that the electricity savings objectives have been achieved, within budget, and the report of in-house labor costs.

Based on the project results, Hydro-Québec will inform you in writing of the balance of financial assistance to which you are entitled. To receive payment, you must issue an invoice for the amount stipulated by Hydro-Québec as set out in subsection 4.5.

If everything is in order, Hydro-Québec will issue payment within 45 days of receiving the invoice.

Adjustment of financial assistance

If the electricity savings objectives are not achieved or the project goes over budget, the total financial assistance for the initiative project is recalculated according to the Program criteria in order to determine the final payment of financial assistance or the amount you must repay.

However, the financial assistance paid out for the project shall never exceed the amount stipulated in the agreement, even if the electricity savings achieved exceed the objective or the project goes over budget.

If, in light of the project results, the payback period, as defined in subsection 4.3, is less than a year or more than 10 years, the financial assistance will be cancelled and you will have to repay any amount already received.

Deliverables

Step	Time limit	Description	Your deliverables
1 **Proposal**		**You** ■ Assess achievable electricity savings ■ Obtain tenders for equipment ■ Prepare and submit initiative project proposal to Hydro-Québec with all required documents **Hydro-Québec** ■ Confirms receipt of proposal and sets aside financial assistance ■ Goes through preliminary approval process	■ Initiative project proposal form (in French) ■ Project measurement plan ■ Cost breakdown
2 **"Before" measurements**	**3 months**	**You** ■ Measure consumption **before** implementation of electricity management measures **Hydro-Québec** ■ Issues final approval of project	■ **"Before"** measurement report ■ In-house labor: cost centre assigned to the project in your accounting system
3 **Agreement**	Order equipment **4 months**	**You** ■ Sign agreement with Hydro-Québec ■ Order equipment for project	■ Signed agreement
4 **First installment**	**45 days**	**Hydro-Québec** ■ Pays out first installment of financial aid, equal to 25% of contractual amount allocated to project	■ Copies of purchase orders ■ Updated cost breakdown ■ Invoice for first installment
5 **Equipment start-up**		**You** ■ Start up equipment	■ Start-up report ■ **"After"** measurement timetable, updated
6 **Second installment**	within **18 months** of signing of agreement	**Hydro-Québec** ■ Checks that all required documents have been provided and are in order ■ Pays out second installment of financial aid, equal to 50% of contractual amount allocated to project	■ Copies of invoices ■ Updated cost breakdown ■ Report generated by your accounting system showing a breakdown of actual in-house labor costs by trade ■ Invoice for second installment

Deliverables (cont'd)

Step	Time limit	Description	Your deliverables
7 **"After" measurements**	within **18 months** of signing of agreement	**You** ■ Measure consumption after implementation of electricity management measures	■ **"After"** measurement report
8 **Third installment**	**45 days**	**Hydro-Québec** ■ Examines measurement report and documents you have provided ■ Reviews total financial assistance and adjusts in light of results ■ Pays out third installment of financial aid, equal to balance of amount allocated to project	■ Final copies of invoices ■ Final cost breakdown ■ Report generated by your accounting system showing a breakdown of actual in-house labor costs by trade ■ Invoice for third installment

6 Measuring Electricity Savings

Only initiative projects that include a measurement plan meeting the Hydro-Québec requirements described in this section are eligible for the Program.

You are responsible for measuring electricity consumption **before** and **after** implementation of the initiative project.

Measurement methods vary in terms of precision and accuracy, depending on the project proposed. The choice of method is based on the following factors:

- Predictability of equipment operating cycles
- Availability of data for assessing electricity savings
- Impact of production variations on electricity consumption
- Cost-effectiveness of measurement method

To help you select satisfactory measurement methods, Hydro-Québec has developed guidelines based on the International Performance Measurement & Verification Protocol, used internationally to measure energy savings. Under these guidelines, measurement methods fall into three categories of increasing precision and accuracy. A table briefly describing the methods is given on the next page.

6.1 Selection of measurement method

It is up to you to select a measurement method, based on the Hydro-Québec requirements described in this section. You are also responsible for the validity of calculations and measurements. You must provide Hydro-Québec with copies of any references used for calculations and copies of any and all measurement data.

The measurement methods must be set out in a measurement plan (see subsection 6.2).

Type of measurement	Description	Typical applications
I – Stipulated savings	Electricity savings are estimated based on engineering calculations and statistical methods using typical equipment specifications (data sheets, nameplate ratings, tables of recognized electricity savings, system case studies, etc.) and generic operating data, without testing or metering on site.	Equipment subject to energy efficiency standards or standardized measurements (e.g., high-efficiency motors, lighting)
II – Basic measurements	Electricity savings are estimated based on engineering calculations using typical equipment specifications (data sheets, nameplate ratings, tables of recognized electricity savings, system case studies, etc.) and generic operating data, supported by short-term measurements or by simple monitoring over a limited period of time.	Equipment or systems with short operating cycles
III – Complete measurements	Electricity savings are estimated based on detailed monitoring over a period providing a representative sample of operating profiles, and in some instances, on an analysis of plant production profiles over an extended period of time.	Equipment, systems or processes with major variations in load and with long operating cycles

6.2 Measurement plan

You must draw up a plan for determining electricity consumption that describes measurement methods to be used **before** and **after** implementation of the initiative project.

The measurement plan must demonstrate to the satisfaction of Hydro-Québec that the chosen monitoring, analysis and calculation methods are appropriate, precise enough and suited to operations.

It is a good idea to have Hydro-Québec check the measurement plan **before** you start the "**before**" measurement required for the proposal.

The measurement plan must be submitted with the project proposal.

Contents of measurement plan

A measurement plan must cover at least the following points.

1. Description of project and project site
   - Project perimeter
   - Baseline production
   - Key production parameters liable to affect electricity savings
2. Description of measurement methods proposed for the initiative project
   - **Before** implementation of the electricity management measures (already done or to be done, as the case may be)
   - **After** implementation of the electricity management measures
     - Preliminary measurement campaign, to be checked by Hydro-Québec, if measurement requires a long period
     - Measurement campaign
   - Assumptions regarding chief variables and unknowns
3. Name of firm or in-house coordinator in charge of taking measurements and preparing analyses, reports and documentation
4. Description of calculation method and any tools used (software, tables, etc.)
   - Complete process indicating how data is obtained and how it is used to perform calculations
   - All equations used
5. Measurement details
   - Description of instruments used
   - Timetable describing duration of measurements, including preliminary measurement campaign, so that Hydro-Québec can check the data
   - Data-checking method
   - Data format
6. Electricity savings adjustment
   - Definition of how electricity savings are adjusted in relation to baseline production
7. Description of sampling method used (when required)
   - Reasons for sampling decisions
   - Sample size
   - Information on sample selection
   - Information on random definition of measurement points

References

Technical energy efficiency literature can be downloaded from **www.hydroquebec.com/majorcustomers/ee.**

Appendix I ■ Standard Industrial Initiative Project Agreement – Major Customers

INDUSTRIAL INITIATIVE PROJECT AGREEMENT – MAJOR CUSTOMERS

The English version of this standard agreement is provided for information purposes only. In all cases, the original French version shall prevail.

By and between

Customer Inc., a corporation duly incorporated under the laws of Canada, represented by its group _____, having offices at _____, province of Québec, Canada _____ _____,

hereinafter "the Customer,"

and

Hydro-Québec, a government corporation established by the *Hydro-Québec Act* (R.S.Q., H-5), having its head office at 75, boul. René-Lévesque Ouest, Montréal, province of Québec, Canada H2Z 1A4,

hereinafter "Hydro-Québec."

THE PARTIES HEREBY AGREE AS FOLLOWS:

1. SUBJECT OF AGREEMENT

Under the Industrial Initiatives Program – Major Customers ("the Program"), as described in the amended version dated September 2008, Hydro-Québec agrees to grant financial assistance to the Customer so that it may carry out an electricity management project ("the Project") at [*description of site*]. The project bears the number II-_____ and is identified by the title _____.

The Project and financial assistance are described in Schedule I.

2. HYDRO-QUÉBEC'S UNDERTAKINGS

2.1 Hydro-Québec agrees to grant to the Customer financial assistance not to exceed the amount of $_____, corresponding to a savings of _____ MWh, for a project costing a total of $_____. These amounts are detailed in Schedule I. This financial assistance shall be paid in three (3) installments, as stipulated in subsections 2.2, 2.3 and 2.4. The financial assistance is granted conditionally and shall be paid provided the Customer fulfills the terms and conditions of the Program, as set out in Schedule II, in their entirety. The financial assistance shall in no case be increased, but may be decreased, depending on the electricity saved or the actual project costs.

2.2 A **first installment**, amounting to twenty-five percent (25%) of the total financial assistance allocated to the Project, shall be paid once Hydro-Québec has checked and approved the purchase orders. If everything is in order, payment shall be made within forty-five (45) days of receipt of all the purchase orders required and an invoice issued by the Customer as per Section 5. To this end, purchase orders shall be issued within four (4) months of the signing of the agreement.

2.3 A **second installment**, amounting to fifty percent (50%) of the total financial assistance allocated to the Project, shall be paid once Hydro-Québec has checked and approved the start-up report, copies of invoices and cost memos, and the updated "after" measurement timetable for the Project. The documents shall be accompanied by a list of project invoices and internal cost memos compiled in an Excel file and an invoice issued by the Customer, as per Section 5. If everything is in order, Hydro-Québec will issue payment within forty-five (45) days of receiving all the required documents.

2.4 A **third and final installment**, amounting to twenty-five percent (25%) of the total financial assistance allocated to the Project, shall be paid once Hydro-Québec has checked and approved the "after" measurement report and associated invoices and cost memos. These documents shall be submitted along with an updated version of the Excel file provided for in subsection 2.3. Hydro-Québec must receive all this information, showing that the Project is within budget and that the electricity savings objectives have been achieved or exceeded, within eighteen (18) months of the signing of the agreement; otherwise, Hydro-Québec shall be under no obligation to pay out the financial assistance. The amount of the third installment may be reduced or repayment may be required, depending on the actual costs and electricity savings.

Standard Agreement

Upon receipt of all the required documents, Hydro-Québec shall confirm the financial assistance and inform the Customer of the amount of the final payment, for which the Customer shall issue an invoice, or of the repayment required, for which Hydro-Québec shall issue an invoice.

If everything is in order, payment shall be made by Hydro-Québec or the Customer within forty-five (45) days of receiving an invoice issued by the other party, as per Section 5.

3. CUSTOMER'S UNDERTAKINGS

3.1 The Customer shall be responsible for choosing the electricity management measures and assessing achievement of the electricity savings objectives, and for the electricity savings actually realized.

3.2 The Customer shall be solely responsible for the results of the Project vis-à-vis Hydro-Québec, although it may subcontract its electricity management project in whole or in part to a third party.

3.3 The Customer shall not delegate a third party to represent it in its dealings with Hydro-Québec.

3.4 The Customer agrees to abide by all the terms, conditions and requirements of the Program, as set out in Schedule II hereof.

3.5 As set out in the Industrial Initiatives Program – Major Customers, the Customer undertakes to

a) Order equipment and provide purchase orders to Hydro-Québec within four (4) months of the signing of the agreement;

b) Complete the Project, including "after" measurements, within eighteen (18) months of the signing of the agreement;

c) Submit all the documents required by subsections 2.2, 2.3 and 2.4 within the time limits specified.

3.6 The Customer agrees that Hydro-Québec may, at any time during regular business hours, check equipment installation, start-up and the taking of measurements **before** and **after** implementation of the electricity management measures in order to make sure that the Project is being carried out in accordance with the agreement and the Program.

3.7 The Customer agrees not to use the money paid out by Hydro-Québec for any purpose except the Project and to repay to Hydro-Québec any amount received and not used for that purpose. The Customer acknowledges that Hydro-Québec shall be entitled to verify how any amount paid as financial assistance was spent.

3.8 The Customer agrees that all general vouchers relating to the implementation of the electricity management measures described in Schedule I shall be made available to an auditor appointed by Hydro-Québec, during regular business hours, on at least twenty-four (24) hours' notice, for up to two (2) years from the end of this agreement.

3.9 The Customer agrees to report to Hydro-Québec any and all financial assistance obtained or applied for with respect to the Project, specifying which amounts come from which sources. The Customer must assume at least twenty-five percent (25%) of the eligible costs of the Project, taking into account all financial assistance from other sources.

3.10 The Customer shall assume responsibility for implementing the Project and shall indemnify and hold harmless Hydro-Québec and its employees from and against any damages, claims or legal proceedings that may arise directly or indirectly from the Project.

3.11 The Customer agrees to mention in any media releases, publicity or advertising concerning the Project that it has been subsidized by Hydro-Québec. However, at no time shall the Customer suggest or imply that Hydro-Québec recommends any product or process whatsoever.

3.12 **Failure to pay**. Hydro-Québec may deduct from any installment of the financial assistance any amount owing to Hydro-Québec, including any electricity bill, whether overdue or not, or any deposit for a service contract held by the Customer or any company in its group, or withhold any installment if the Customer cannot demonstrate that its financial situation is sufficiently stable to ensure completion of the Project.

4. CONFIDENTIALITY

4.1 The Customer agrees that it is necessary to disclose to Hydro-Québec confidential information (whether in writing, verbally or visually)—including, without limiting the generality of the foregoing, data, formulas, processes, models, photographs, plans, drawings, specifications, reports, studies and ideas—and Hydro-Québec undertakes to keep such information confidential. However, confidential information does not include the following:

Standard Agreement

(i) The Customer's name, the Project cost, the amounts of financial assistance granted, the electricity management measures and their field of application, described in general terms, and the electricity savings actually realized;

(ii) Any information that was in the public domain at the time it was disclosed;

(iii) Any information that, after being disclosed, entered the public domain through no doing of Hydro-Québec's;

(iv) Any information that Hydro-Québec can prove that it had in its possession before it was disclosed;

(v) Any information disclosed to Hydro-Québec without restriction by a third party legitimately entitled to disclose it.

4.2 Any disclosure to the public or to a third party of the Customer's confidential information shall be the subject of a written agreement. The Customer agrees to authorize the disclosure of confidential information provided that such disclosure does not adversely affect its competitive position.

5. TAX IMPLICATIONS

5.1 Payments by Hydro-Québec under the Program are subject to the goods and services tax (GST) and Québec sales tax (QST), unless the Customer is not required by law to collect those taxes. As a result, in order for Hydro-Québec to issue payment under the Program, the Customer shall first issue an invoice indicating the amounts of taxes separately. The invoice shall also include all the information stipulated by tax regulations, including GST and QST registration numbers. It is up to the Customer to determine whether it must charge GST and QST. If a Customer is not in business, it shall so indicate on the invoice issued. Hydro-Québec shall not be liable for any error in collecting taxes.

5.2 For income tax purposes, the financial assistance paid out under the Program is an inducement that should reduce the cost or capital cost of a good, reduce the amount of an expenditure or of an expense or constitute revenue to the Customer, as the case may be. It is up to the Customer to determine the tax status of the financial assistance received from Hydro-Québec. Unless the Customer is exempt from paying tax, Hydro-Québec issues a *Relevé 27 – Paiements du gouvernement* [government payments] information slip as required by the Québec *Taxation Act*, as a record of financial assistance paid.

6. ASSIGNMENT

This agreement shall not be assigned, sold or transferred, in whole or in part, without the written consent of Hydro-Québec.

The Customer agrees to obtain Hydro-Québec's written consent before assigning any receivables that may affect this agreement. If a receivable is assigned without such written consent, Hydro-Québec may terminate the agreement as of the date on which the assignment was made.

7. CANCELLATION

Hydro-Québec may cancel this agreement upon simple written notice if the Customer fails to fulfill any of its undertakings or obligations hereunder, or if the Customer becomes insolvent, declares bankruptcy or disposes of its property.

8. AMENDMENTS

Any amendment to this agreement shall be made in writing and signed by the parties.

9. REPRESENTATIVES OF PARTIES

The persons named below shall represent the parties for the purposes of this agreement.

For Hydro-Québec	For Customer Inc.
_____	_____
Name	Name
_____	_____
Engineer – Technical Services	Title
	_____
Direction – Grandes entreprises	_____
Hydro-Québec	
18e étage	_____
2, complexe Desjardins, tour Est	
C.P. 10000, succ. Desjardins	_____
Montréal (Québec) H5B 1H7	
Telephone: 514 879-4100, ext. _____	Telephone: _____
E-mail: _____	E-mail: _____
Fax: _____	Fax: _____

Should either party replace its representative, it shall notify the other party to this effect in writing.

Project: _____

Standard Agreement

10. AGREEMENT DOCUMENTS

10.1 Schedules I and II mentioned herein are an integral part of the agreement. The Customer hereby declares that it has read Schedule II, the amended version dated September 2008 of the Industrial Initiatives Program – Major Customers provided on CD-ROM, and agrees to all its terms, conditions and requirements.

10.2 Hydro-Québec reserves the exclusive right to interpret the terms and conditions of the Program.

11. APPLICABLE LAWS

The parties agree that this agreement shall be governed by the laws applicable in Québec and that any legal proceedings arising herefrom shall be instituted in the judicial district of Montréal.

12. EFFECTIVE DATE AND TERM OF AGREEMENT

This agreement shall come into effect on the last date that the agreement is signed by either of the parties and shall be in force until the obligations of both parties stipulated in subsection 2.4 have been met.

IN WITNESS WHEREOF, THE PARTIES, HAVING READ AND ACCEPTED THIS AGREEMENT AND THE CLAUSES HEREIN CONTAINED, HAVE THEREFORE DULY SIGNED:

Important note
Under our corporate directive on the Charter of the French Language, *the French version of this Agreement must be signed.*

Project:_____

Standard agreement

SCHEDULE I

Description of Project and Financial Assistance

Standard Agreement

SCHEDULE II

Program Guide on CD-ROM
(in folder pocket)

Standard Agreement

Project: _____

Appendix II — Tables of Minimum Motor Efficiency under the *Energy Efficiency Regulations*, November 1997

Electric Motors (1 to 200 hp/0.746 to 150 kW)

The following are examples of unique motor identifiers (UMIs) for NEMA and IEC motors, respectively:

- MANUF-1HP-2-enclosed
- MANUF-3kW-6-open

Only one report must be filed for all motors that have the same UMI.

Energy Efficiency Standards for NEMA Motors Minimum Nominal Efficiency

Power in hp	Open			Enclosed		
	2-pole	4-pole	6-pole	2-pole	4-pole	6-pole
1	75.5	82.5	80.0	75.5	82.5	80.0
1.5	82.5	84.0	84.0	82.5	84.0	85.5
2	84.0	84.0	85.5	84.0	84.0	86.5
3	84.0	86.5	86.5	85.5	87.5	87.5
5	85.5	87.5	87.5	87.5	87.5	87.5
7.5	87.5	88.5	88.5	88.5	89.5	89.5
10	88.5	89.5	90.2	89.5	89.5	89.5
15	89.5	91.0	90.2	90.2	91.0	90.2
20	90.2	91.0	91.0	90.2	91.0	90.2
25	91.0	91.7	91.7	91.0	92.4	91.7
30	91.0	92.4	92.4	91.0	92.4	91.7
40	91.7	93.0	93.0	91.7	93.0	93.0
50	92.4	93.0	93.0	92.4	93.0	93.0
60	93.0	93.6	93.6	93.0	93.6	93.6
75	93.0	94.1	93.6	93.0	94.1	93.6
100	93.0	94.1	94.1	93.6	94.5	94.1
125	93.6	94.5	94.1	94.5	94.5	94.1
150	93.6	95.0	94.5	94.5	95.0	95.0
175	94.5	95.0	94.5	95.0	95.0	95.0
200	94.5	95.0	94.5	95.0	95.0	95.0

Source: Natural Resources Canada, **http://oee.rncan.gc.ca/regulations/product/electric_motors.cfm**

Energy Efficiency Standards for IEC Motors (Including Frame 100) Minimum Nominal Efficiency

Power in hp	Open			Enclosed		
	2-pole	4-pole	6-pole	2-pole	4-pole	6-pole
0.75	75.5	82.5	80.0	75.5	82.5	80.0
1.1	82.5	84.0	84.0	82.5	84.0	85.5
1.5	84.0	84.0	85.5	84.0	84.0	85.5
2.2	84.0	84.0	86.5	85.5	84.0	87.5
3.0	84.0	84.0	86.5	85.5	84.0	87.5
3.7	85.5	87.5	87.5	87.5	87.5	87.5
4.0	85.5	87.5	87.5	87.5	87.5	87.5
5.5	87.5	88.5	88.5	88.5	89.5	89.5
7.5	88.5	89.5	90.2	89.5	89.5	89.5
11	89.5	91.0	90.2	90.2	91.0	90.2
15	90.2	91.0	91.0	90.2	91.0	90.2
18.5	91.0	91.7	91.7	91.0	92.4	91.7
22	91.0	92.4	92.4	91.0	92.4	91.7
30	91.7	93.0	93.0	91.7	93.0	93.0
37	92.4	93.0	93.0	92.4	93.0	93.0
45	93.0	93.6	93.6	93.0	93.6	93.6
55	93.0	94.1	93.6	93.0	94.1	93.6
75	93.0	94.1	94.1	93.6	94.5	94.1
90	93.6	94.5	94.1	94.5	94.5	94.1
110	93.6	95.0	94.5	94.5	95.0	95.0
132	94.5	95.0	94.5	95.0	95.0	95.0
150	94.5	95.0	94.5	95.0	95.0	95.0

Source: Natural Resources Canada, **http://oee.rncan.gc.ca/regulations/product/electric_motors.cfm**

Appendix III

Cost Breakdown
Differential Cost Breakdown

Cost Breakdown

Customer's name: _____
HQ file no.: _____
Date received: _____

Customer's project no.: _____
Customer's account no.: _____

Supplier	Description of goods or services purchased	Detailed cost estimate (C$)			Actual project costs						Difference between invoice and purchase order[3]	
					Purchase orders			Invoices and/or cost memos[2]				
		Proposal	Preliminary acceptance	Contract	No.	Date	C$[1] (a)	No.	Date	C$[1] (b)	C$ (b) - (a)	Explanation
A. Equipment purchases												
1.												
2.												
3.												
4.												
5.												
6.												
7.												
8.												
9.												
10.												
11.												
12.												
13.												
14.												
	Total				**Total**			**Total**				
B. Measuring instrument purchases												
1.												
2.												
3.												
	Total				**Total**			**Total**				
C. "Before" and "after" measurement costs												
1.												
2.												
3.												
	Total				**Total**			**Total**				
D. In-house labor costs, by trade[4]												
1.												
2.												
3.												
	Total				**Total**			**Total**				
E. Outside engineering costs												
1.												
2.												
3.												
	Total				**Total**			**Total**				
F. Installation and start-up contracts												
1.												
2.												
3.												
4.												
5.												
6.												
7.												
8.												
9.												
10.												
	Total				**Total**			**Total**				
TOTAL COSTS												

(1) If costs are entered in foreign currency, indicate on a separate sheet the value in Canadian dollars and the exchange rate used.
(2) Enter each invoice submitted.
(3) Difference between actual invoice and purchase order.
(4) In Proposal column, give detail by trade. At the time of the second and third installments, real costs must be accompanied by an in-house labor cost progress report generated by your accounting system. The report should specify the number of hours and hourly rate per employee, and the total cost per trade.

An electronic version of this table (in French) is available at **www.hydroquebec.com/majorcustomers/ee**

Differential Cost Breakdown

Customer's name: _____
HQ file no.: _____
Date received: _____

Customer's project no.: _____
Customer's account no.: _____

Supplier	Description of goods or services purchased	Detailed cost estimates (C$)			Actual project costs						Cost of benchmark equipment	Eligible costs[3]	
					Purchase orders			Invoices and/or cost memos[2]					
		Proposal	Preliminary acceptance	Contract	No.	Date	C$[1]	No.	Date	C$[1] (a)	C$ (b)	C$ (b) - (a)	Explanation
A. Equipment purchases													
1.													
2.													
3.													
4.													
5.													
6.													
7.													
8.													
9.													
10.													
11.													
12.													
13.													
14.													
	Total				Total			Total					
B. Measuring instrument purchases													
1.													
2.													
3.													
	Total				Total			Total					
C. "Before" and "after" measurement costs													
1.													
2.													
3.													
	Total				Total			Total					
D. In-house labor costs, by trade[4]													
1.													
2.													
3.													
	Total				Total			Total					
E. Outside engineering costs													
1.													
2.													
3.													
	Total				Total			Total					
F. Installation and start-up contracts													
1.													
2.													
3.													
4.													
5.													
6.													
7.													
8.													
9.													
10.													
	Total				Total			Total					
TOTAL COSTS													

(1) If costs are entered in foreign currency, indicate on a separate sheet the value in Canadian dollars and the exchange rate used.
(2) Enter each invoice submitted.
(3) Eligible cost is difference between actual invoice and cost of benchmark equipment.
(4) In Proposal column, give detail by trade. At the time of the second and third installments, real costs must be accompanied by an in-house labor cost progress report generated by your accounting system. The report should specify the number of hours and hourly rate per employee, and the total cost per trade.

An electronic version of this table (in French) is available at **www.hydroquebec.com/majorcustomers/ee**

Appendix IV Contents of Measurement Report

Contents of Measurement Report

A measurement report must contain the following infomation:

1. **Project title and number**

2. **Description of methods used for project measurements (if different from measurement plan)**

   - Description of device and parameters measured (kWh)
   - Timetable describing measurement period and frequency of measurement at various points

3. **Name of firm or person who took measurements (if different from measurement plan)**

   - Name of engineer who signed measurement report

4. **Description of calculations and tools used (software, tables, etc.)**

   - Description of calculation methods used to determine energy savings for the measurement period as well as the annualization, with total electricity savings very clearly shown
   - Measurement data in an Excel file, or in the form of graphs if gathered by a measuring device

5. **Adjustment of electricity savings according to baseline production**

   - Use an engineering calculation to demonstrate how electricity savings have been adjusted in terms of baseline production (if applicable)

6. **Required appendixes, if applicable**

N.B. Measurement reports must be signed by an engineer.

Appendix V Contents of Start-up Report

Contents of Start-up Report

The start-up report must contain the following information:

1. **Project title and number**

2. **Brief outline of work done, if different from original project**

3. **Description of problems encountered during start-up (if any)**

4. **List of major equipment replaced or removed**

   - Nameplate data, including manufacturer's name, model number and serial number (if applicable)

5. **List of new equipment installed**

   - Nameplate data, including manufacturer's name, model number and serial number (if applicable)

6. **Start-up date**

N.B. The report must be signed by an engineer or the project manager.

ENERGY WISE Industrial Initiatives Program – Major Customers
Initiative Project Proposal Form

Important note: In compliance with Hydro-Québec's directive on the application of the *Charter of the French Language*, all written communications with legal entities having a place of business in Québec are in French only.

Customers wishing to submit a proposal under the ENERGY WISE Industrial Initiatives Program – Major Customers must therefore complete the initiative project proposal form [*Formulaire de proposition pour un projet d'initiatives*] in French. A translation of the contents of this form is provided below for information purposes only.

If you are using the electronic version of the form, available from **www.hydroquebec.com/majorcustomers/ee**, each response field will expand to accommodate your answer. If you are filling out the hard copy (or printed version), you may attach separate sheets for responses that do not fit in the spaces provided.

1. Applicant identification

Applicant's name | Title

Telephone | Fax | E-mail

Company name

Address | Municipality | Postal code

Applicant's signature | **Date**

The applicant must have company signing authority.

2. Project site

HQ account no. | **Plant name**

Address of industrial site of project *(if different from above)* | Municipality | Postal code

Name of project manager *(if not applicant)* | Telephone | Fax | E-mail

Project manager's address *(if different from site)* | Municipality | Postal code

3. Industry in which plant is active

Pulp & paper | Mining | Chemicals/Petrochemicals | Food

Iron & steel, smelting & refining | Metallurgy | Manufacturing | Other *(specify)*

4. Description of initiative project

Project title

Brief description of project

5. Summary of initiative project timetable

What are the planned project dates (assuming about six weeks for Hydro-Québec to review proposal)?

Submission of copies of purchase orders | Start-up | Submission of "after" measurement report

Courtesy translation, for reference only

6. Description of electricity-saving measures and production parameters

Planned electricity-saving measures

Baseline production parameters before implementation of electricity-saving measures*

*See definitions in *Industrial Initiatives Program – Major Customers Participant's Guide*, Section 1

Baseline production parameters planned for after implementation of electricity-saving measures

"Before" and "after" baseline production parameters will be: Identical **Different**

Describe

Adjustments required to compare "before" and "after" electricity consumption on the basis of "before" baseline production

No adjustment required **Adjustments required**

Describe

7. Summary of methods for measuring electricity consumption before and after implementation of electricity-saving measures

7.1 **"Before" measurements** (Explain methods briefly. See *Industrial Initiatives Program – Major Customers Participant's Guide*, Section 6.)

7.2 **"After" measurements** (Explain methods briefly. See *Industrial Initiatives Program – Major Customers Participant's Guide*, Section 6.)

A measurement plan must be submitted. (See Section 10, Document checklist.)

Courtesy translation, for reference only

8. Summary of electricity savings

A summary of required Excel spreadsheet data (see Section 10) must be given in the table below.

Summary of "before" electricity consumption	
Production parameters used to calculate "before" consumption (units/year) (1)	
Electricity consumption calculated or measured before (MWh/year) (2)	
Specific "before" electricity consumption (MWh/unit) (3) = (2) / (1)	

Summary of "after" electricity consumption	
Production parameters used to calculate consumption after implementation of measures (units/year) (4)	
Electricity consumption calculated after (MWh/year) (5)	
Specific "after" electricity consumption (MWh/unit) (6) = (5) / (4)	

Summary of electricity savings	
Electricity savings (MWh/year), adjusted as necessary* (7) = (2) – (5) ± adjustments	
Specific electricity savings (MWh/year per unit), adjusted as necessary* (8) = (3) – (6) ± adjustments	

*Adjusted electricity savings (MWh/year): Difference between electricity consumption **before** and **after** implementation of the electricity management measures, adjusted to take into account discrepancies between the level of production at the time the measurement was done and baseline production.

courtesy translation, for reference only

9. Summary of project costs

A summary of required Excel spreadsheet data (see Section 10) must be given in the table below.
Taxes not refunded by the governments may be included in these costs.

Project costs		**Costs (C$)**
Equipment purchase costs	A =	
Measuring instrument purchase costs	B =	
"Before" and "after" measurement costs	C =	
In-house labor costs	D =	
Outside engineering costs	E =	
Costs of installation and start-up contracts	F =	
Costs of motors not built into the machinery *(cost differential between premium efficiency motors and motors that meet the efficiency standards of the* Energy Efficiency Regulations, *November 1997)*	G =	
Total project costs	**H = (A + B + C + D + E + F + G) =**	
Total electricity savings (MWh/year)	**I =**	
Cost of electricity ($/MWh)[1]	**J =**	

1. The cost of electricity is the mean annual cost calculated using Rate L and the customer's bill for the previous year.

Value of electricity savings ($) K = I x J =

Payback period (years), based solely on electricity savings[2] H / K =

2. No financial assistance will be granted if the payback period exceeds 10 years.

Calculation of financial assistance requested: Lowest of following amounts

Reducing payback period to one year	L = (H - K) =	
Maximum of 75% of eligible project costs	L = (H x 75%) =	
Maximum of $150/MWh (15¢/kWh) saved over a full year	L = (I x $150) =	
Maximum of $350,000 per project	L =	$350,000
	Lowest of above amounts	**M = (Lowest L)**

Financial assistance from other sources (Identify sources and amounts.)

Total contributions from other sources N =

Customer's contribution

Customer's contribution to project **O = (H - M - N) = $**

Customer's contribution as percentage (minimum 25% of total project costs) **P = O / H = %**

Courtesy translation, for reference only

10. Document checklist

The following documents **must** be submitted with this proposal.

■ Detailed list of eligible project costs

Breakdown of eligible costs, **recorded in the Excel file** *Grille détaillée des coûts*, available from **www.hydroquebec.qc.ca/majorcustomers/ee** (see courtesy translation, Cost Breakdown, in Appendix III of *ENERGY WISE Industrial Initiatives Program – Major Customers Participant's Guide)* configured as follows:

1. **Description and purchase costs of equipment**
2. **Description and purchase costs of measuring instruments**
3. **Description and costs of "before" measurements, if data not available from existing equipment**
4. **Description and costs of "after" measurements**
5. **Description and costs of outside engineering**
6. **Description and costs of installation and start-up contracts**
7. **Costs of *premium efficiency* motors not built into machinery**
   - Description and costs of premium efficiency motors acquired, subtracted from cost of motors that meet the efficiency standards of the *Energy Efficiency Regulations*, November 1997
8. **In-house labor cost, by trade**

■ Detailed calculation of electricity savings

Electricity consumption before and after implementation of electricity-saving measures, **recorded in an Excel file** configured as follows:

Production parameters

- Baseline production before implementation of measures
- Anticipated baseline production after implementation of measures (if different)
- Adjustments required to restate results of calculations and measurements in terms of "before" baseline production parameters

"Before" calculation

- Production parameters (products, productivity indicators, operating cycles, etc.) that influence consumption
- Definitions and values of process or system variables that influence consumption (flow, pressure, temperature, etc.)
- For each parameter and variable, indicate the origin of the value (measured, calculated or taken from technical data sheets, nameplates, nomograms, etc.)
- Formulas, results and references for calculating electricity savings

"After" calculation

- Production parameters (products, productivity indicators, operating cycles, etc.) that influence consumption
- Definitions and values of future process or system variables that influence consumption (flow, pressure, temperature, amperage, power, efficiency, etc.)
- For each parameter and variable, indicate the origin of the value (measured, calculated or taken from technical data sheets, nameplates, nomograms, etc.)
- Formulas, results and references for calculating electricity savings

■ Measurement data already available, along with assumptions, as necessary

■ Plan for measuring "before" and "after" electricity consumption

■ Technical specifications of equipment

■ Process and instrumentation diagram (P&ID) or similar

■ Useful production data

Courtesy translation, for reference only

2008G851A.05M

Forging solutions together

www.hydroquebec.com/majorcustomers/ee

Hydro-Québec
Produced by *Direction principale – Communications*
for *Direction – Grandes entreprises*

E-mail: programmes.ge@hydro.qc.ca
Telephone: 1 866 373-6306

Legal deposit: 3rd quarter 2008
Library and Archives Canada
Bibliothèque nationale du Québec
ISBN: 978-2-550-54066-3

September 2008

2008G850A,05M

Ce document est également publié en français.

Hydro Québec

FSC Recycled
Supporting responsible use of forest resources
www.fsc.org Cert no. SGS-COC-2332
© 1996 Forest Stewardship Council
100%